

FIG. -1-

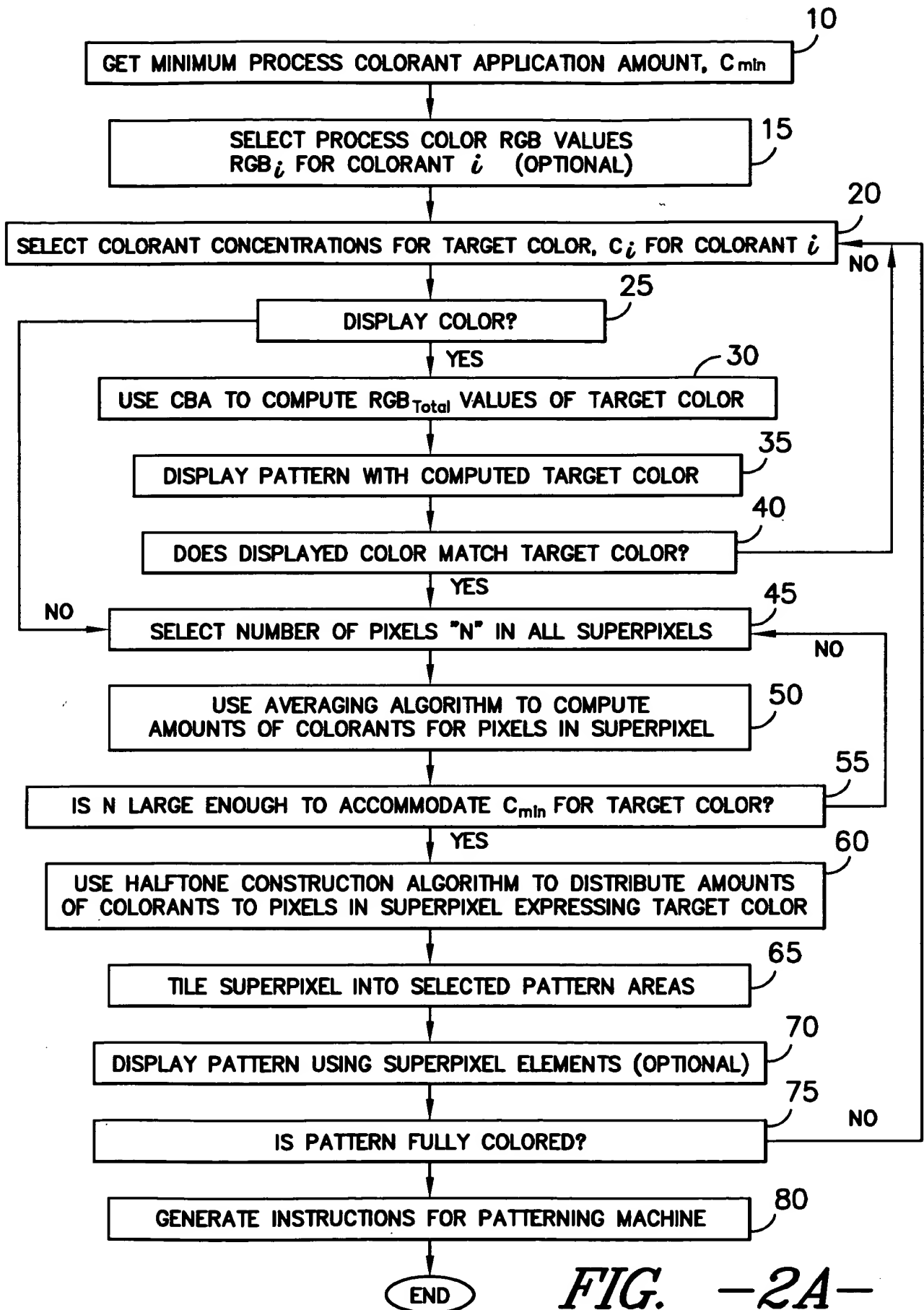


FIG. -2A-

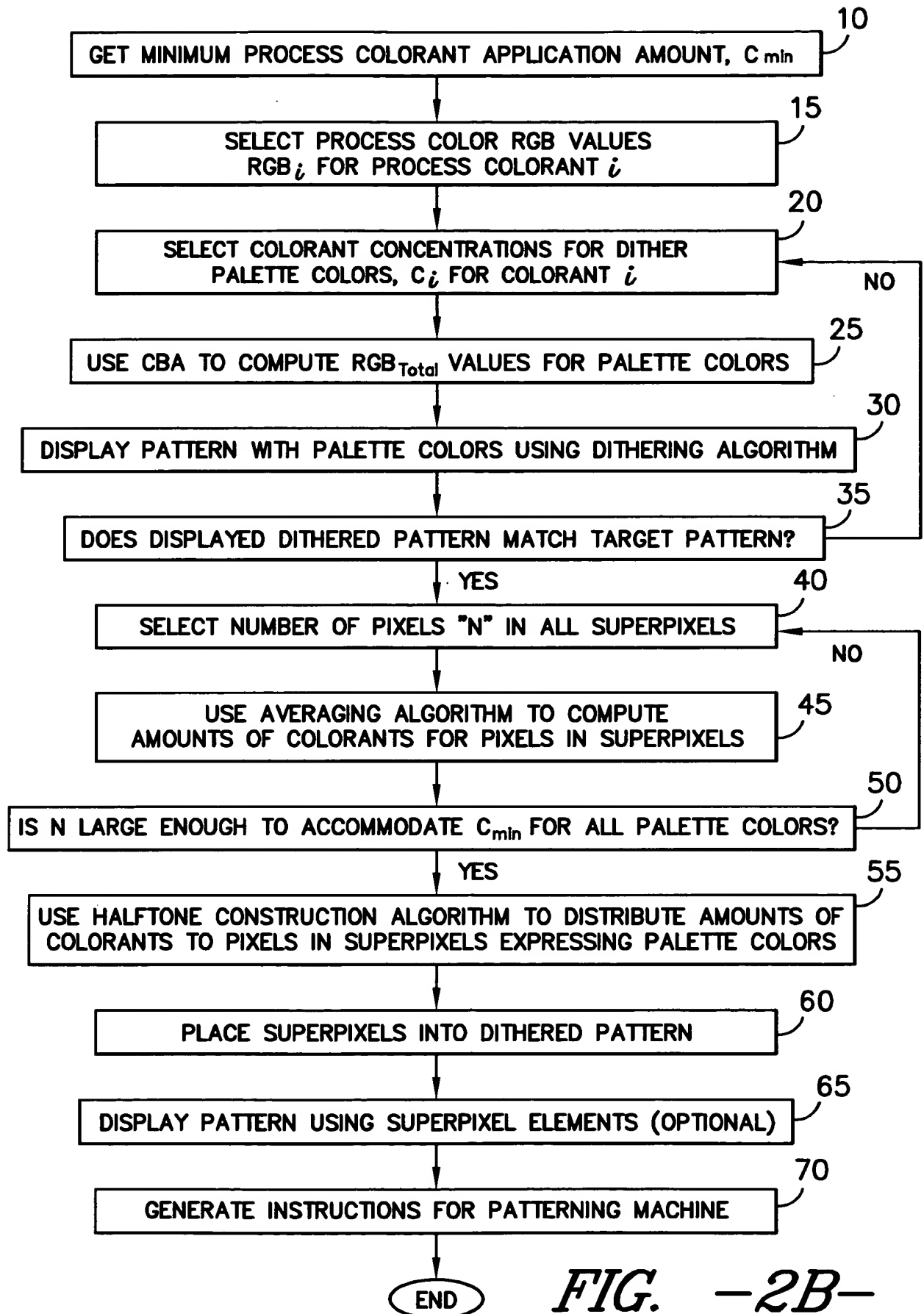


FIG. -2B-

START

INPUT: GAMMA: CHARACTERISTIC OF COMPUTER MONITOR (RANGE 1 TO 3)
 WICK: CHARACTERISTIC OF CARPET SUBSTRATE (RANGE 0 TO 3)
 DENSITY: CHARACTERISTIC OF CARPET SUBSTRATE (RANGE 0 TO ≈ 5)
 C_i : RELATIVE CONCENTRATION OF DYE i USED IN BLEND
 $i = 1, 2, \dots, N$ (RANGE 0 TO 1)
 RGB_{SUBSTRATE}: RED, GREEN, BLUE OF SUBSTRATE (RANGE 0 TO 255)
 RGB _{i} : TABLE OF RED, GREEN, BLUE VALUES FOR DYE i
 USED IN BLEND $i = 1, 2, \dots, N$ (RANGE 0 TO 1)
 N: NUMBER OF DYES IN BLEND

COMPUTE TOTAL DYE CONCENTRATION BY SUMMING INDIVIDUAL PERCENTAGES
 $CONC_{TOTAL} = C_1 + C_2 + C_3 + \dots + C_N$

CALCULATE UNUSED SUBSTRATE DYE CAPACITY FROM TOTAL
 DYE CONCENTRATION
 $CONC_{UNUSED} = 1 - CONC_{TOTAL}$

CALCULATE AN "EFFECTIVE" UNUSED SUBSTRATE DYE CAPACITY BY USING
 SUBSTRATE WICK VALUE $E(C) = C[1 - C \cdot (1 - C)WICK]$
 $E_{UNUSED} = E(CONC_{UNUSED})$

CALCULATE THE "EFFECTIVE" CONCENTRATION OF EACH DYE i USED
 IN THE BLEND BY USING THE SUBSTRATE WICK PROPERTY
 (NOTE: EACH "EFFECTIVE" DYE CONCENTRATION DEPENDS, IN A LINEAR
 WAY, UPON THE EFFECTIVE DYE CONCENTRATIONS OF THE DYE PLACED
 ON THE CARPET PRIOR TO THE CURRENT ONE)
 $E_1 = E(CONC_{UNUSED} + C_1) - E_{UNUSED}$
 $E_2 = E(CONC_{UNUSED} + C_1 + C_2) - E_1$
 $E_3 = E(CONC_{UNUSED} + C_1 + C_2 + C_3) - E_2$
 \dots
 $E_N = E(CONC_{UNUSED} + C_1 + C_2 + C_3 + \dots + C_N) - E_{N-1}$

A

FIG. -3A-

00934729 082201

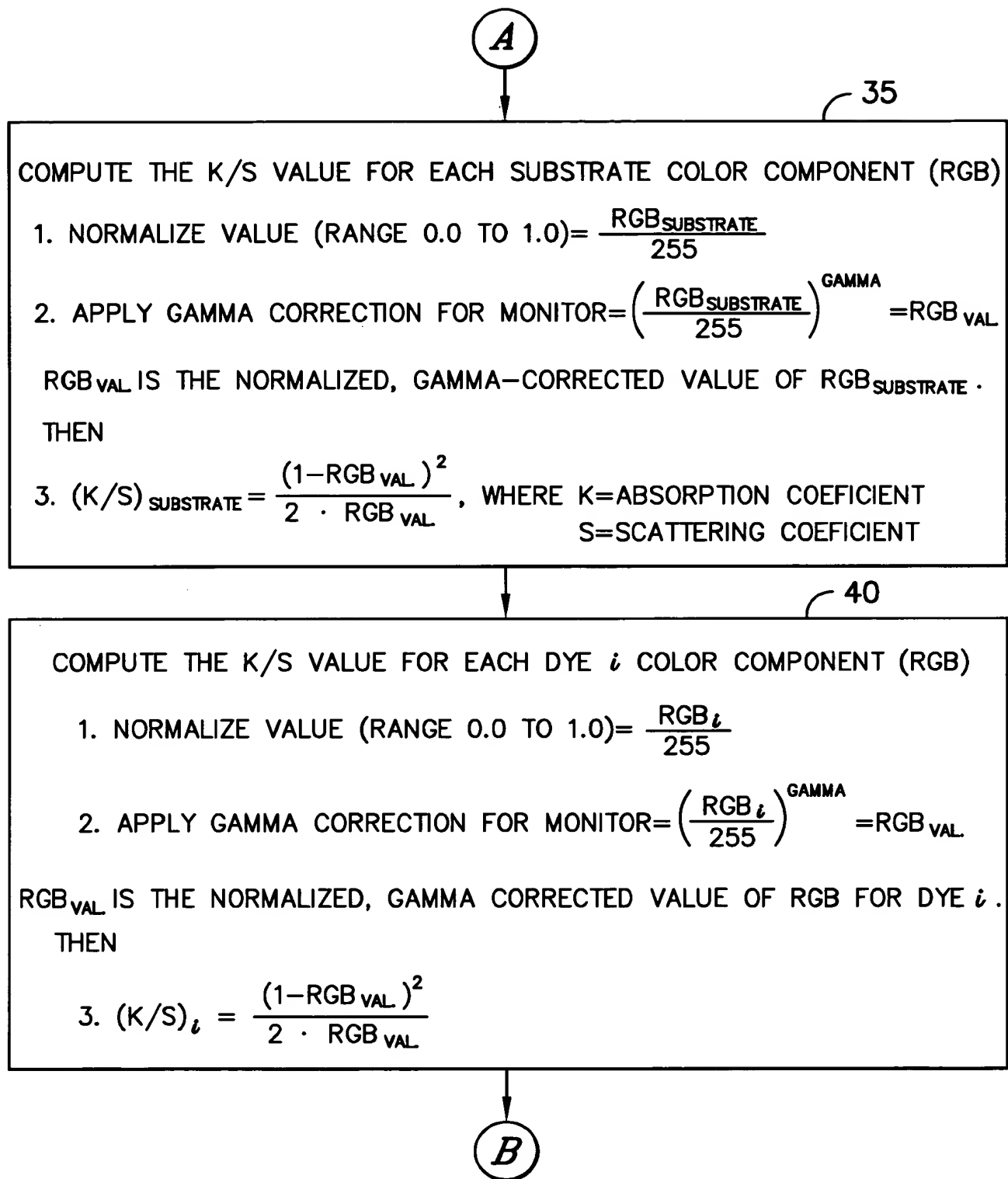


FIG. -3B-

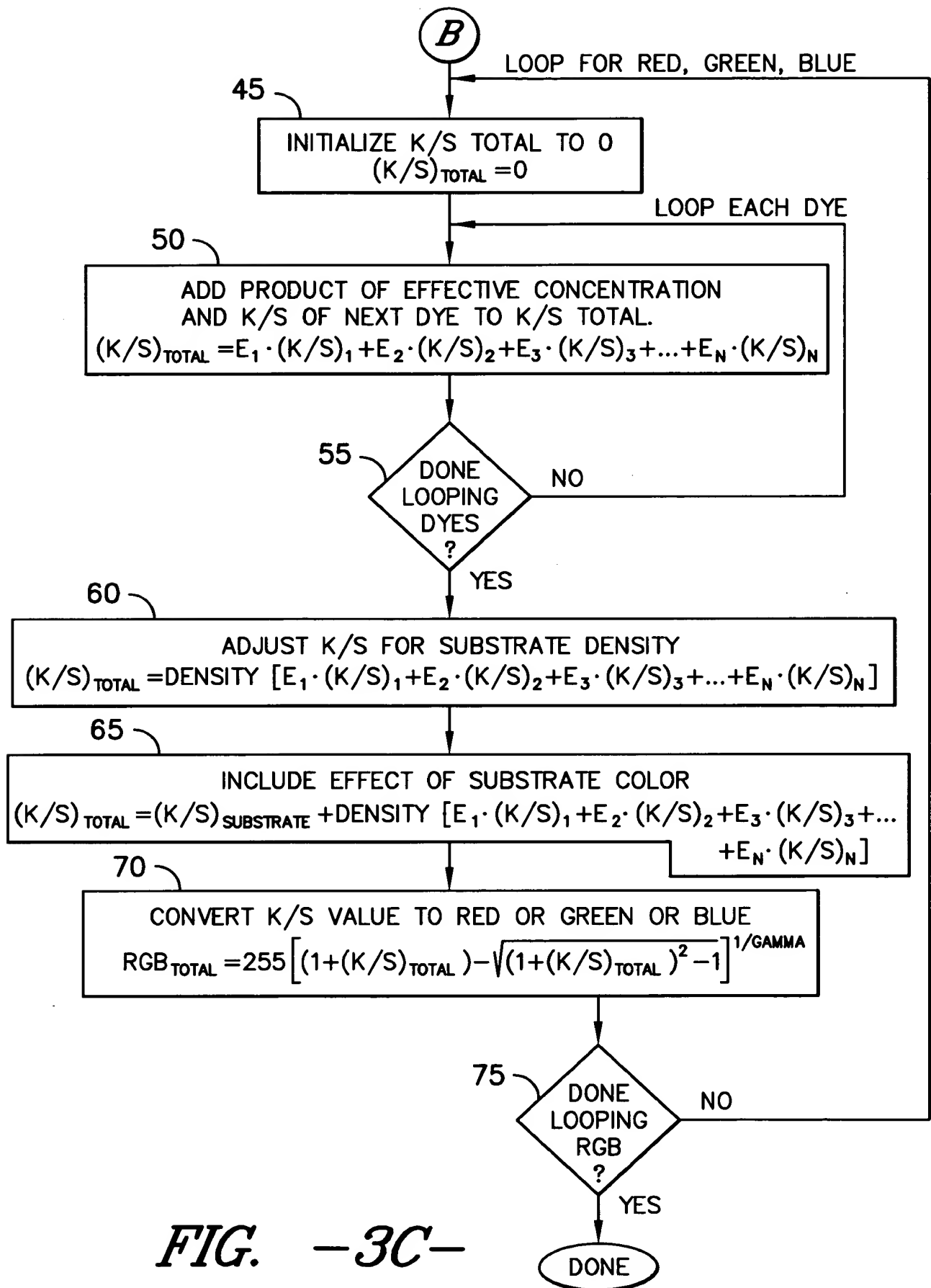


FIG. -3C-

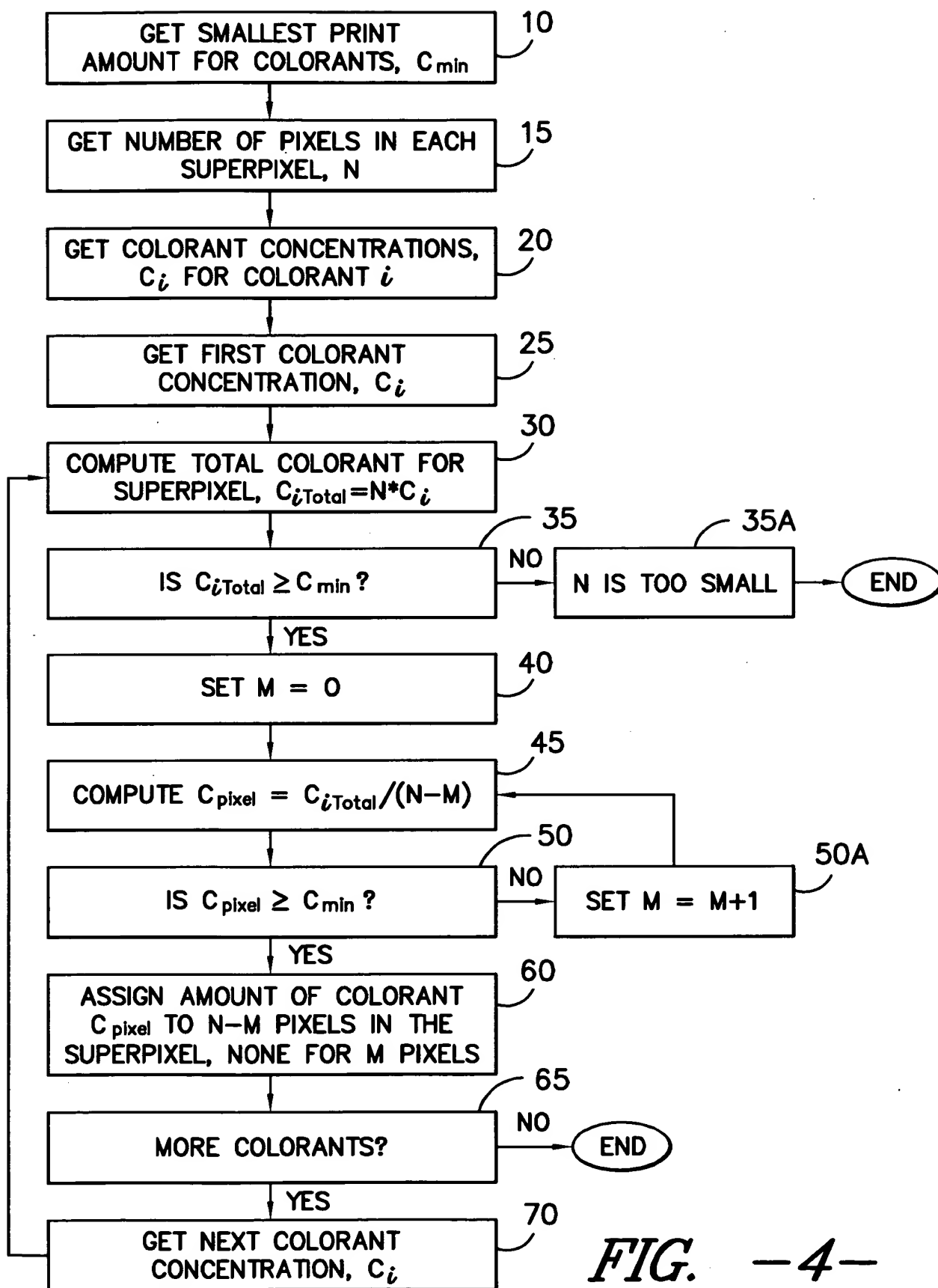


FIG. -4-

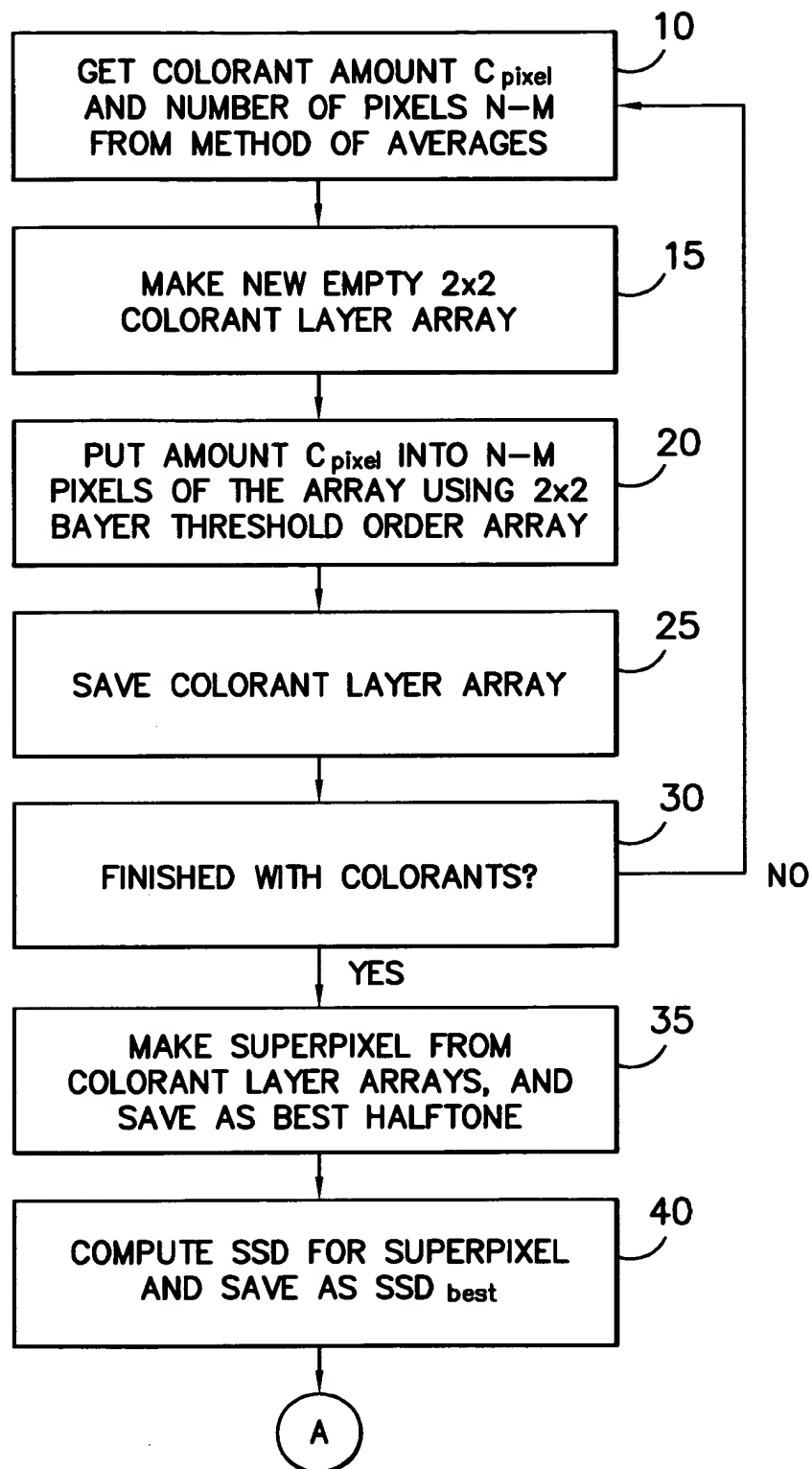


FIG. -5A-

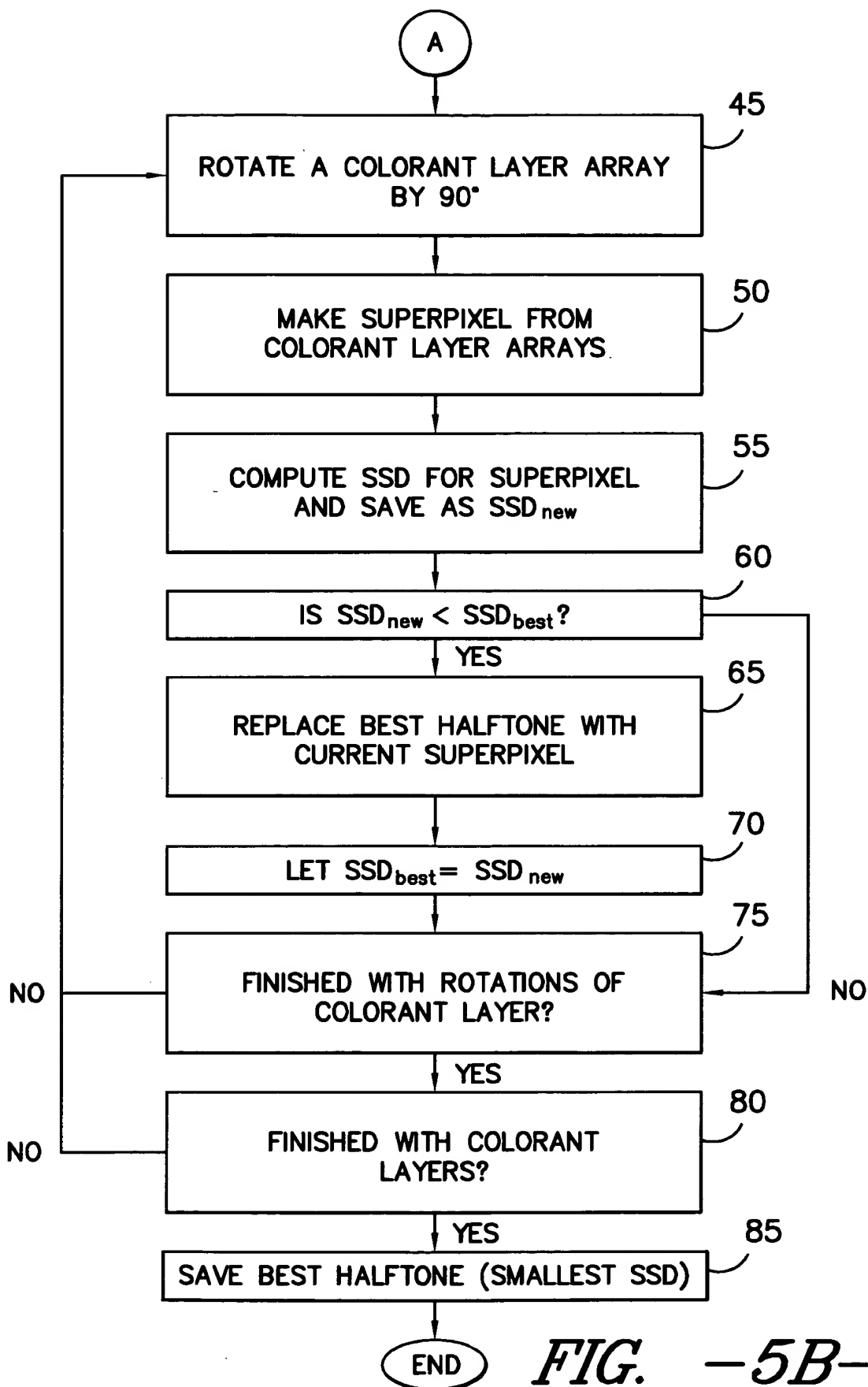


FIG. -5B-

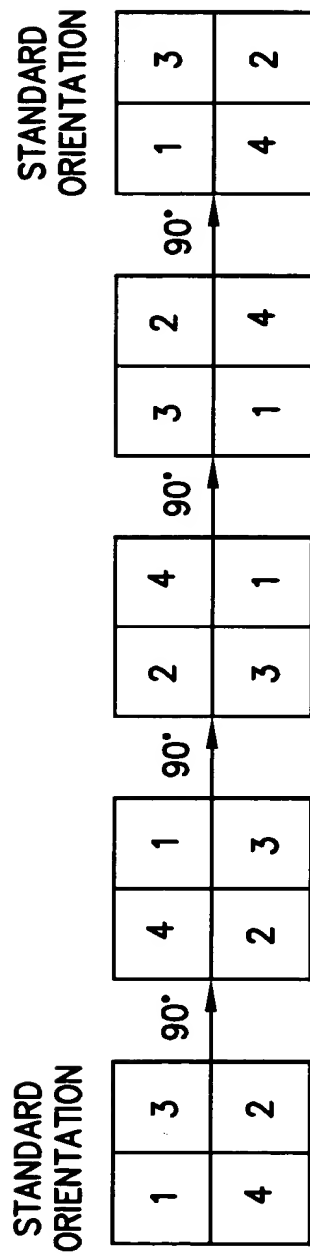


FIG. -6-

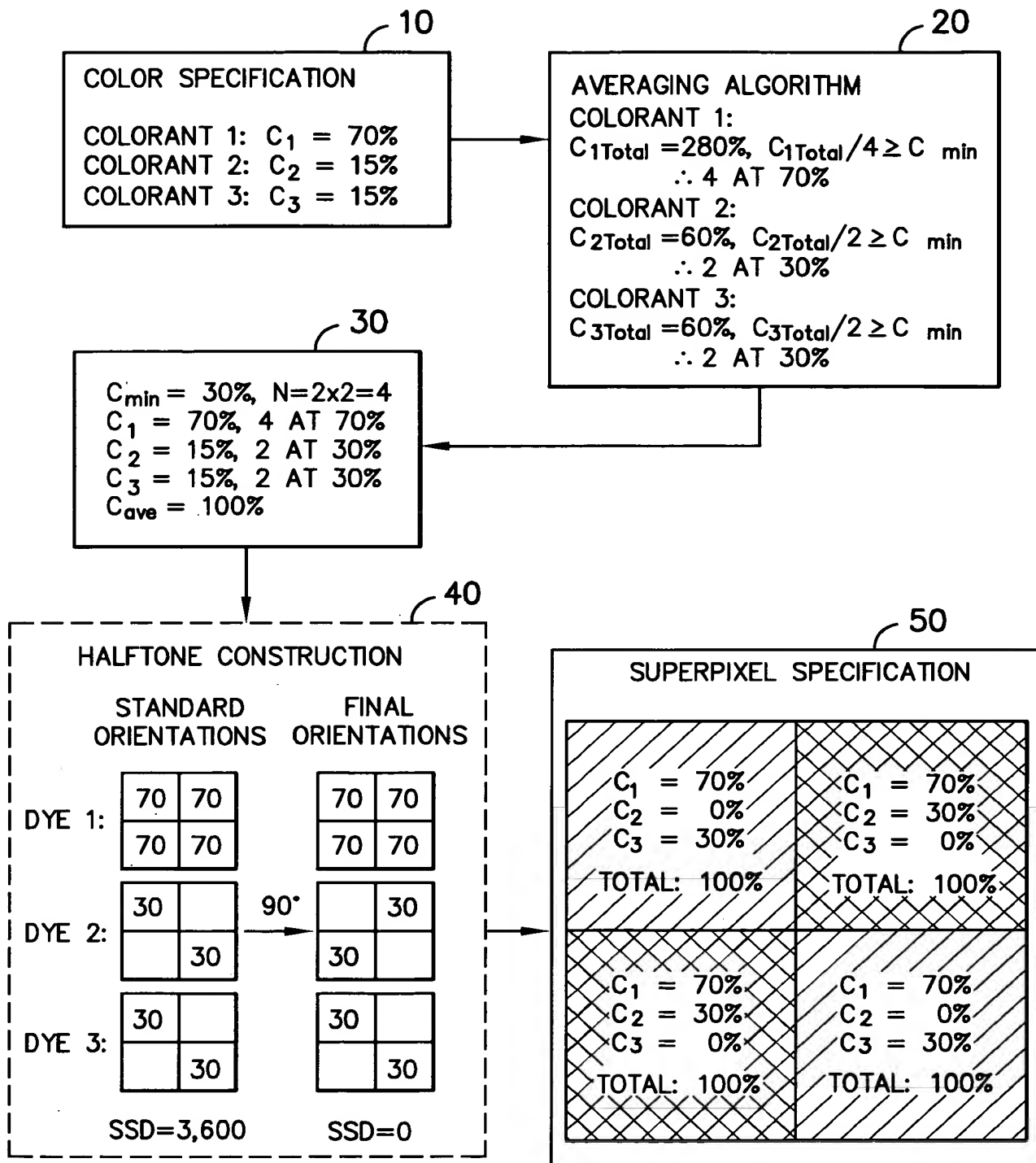


FIG. -7-

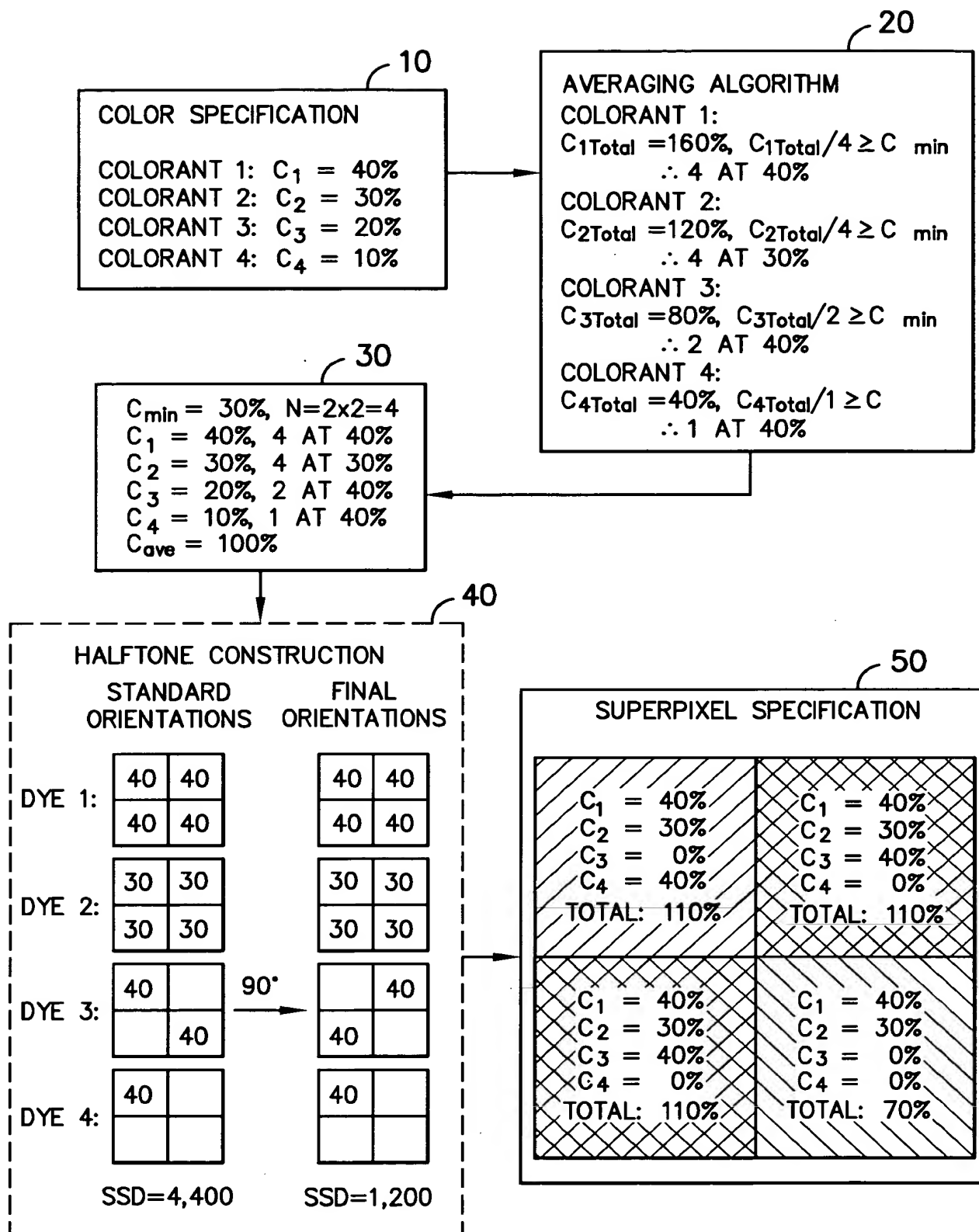


FIG. -8-

[illegible]

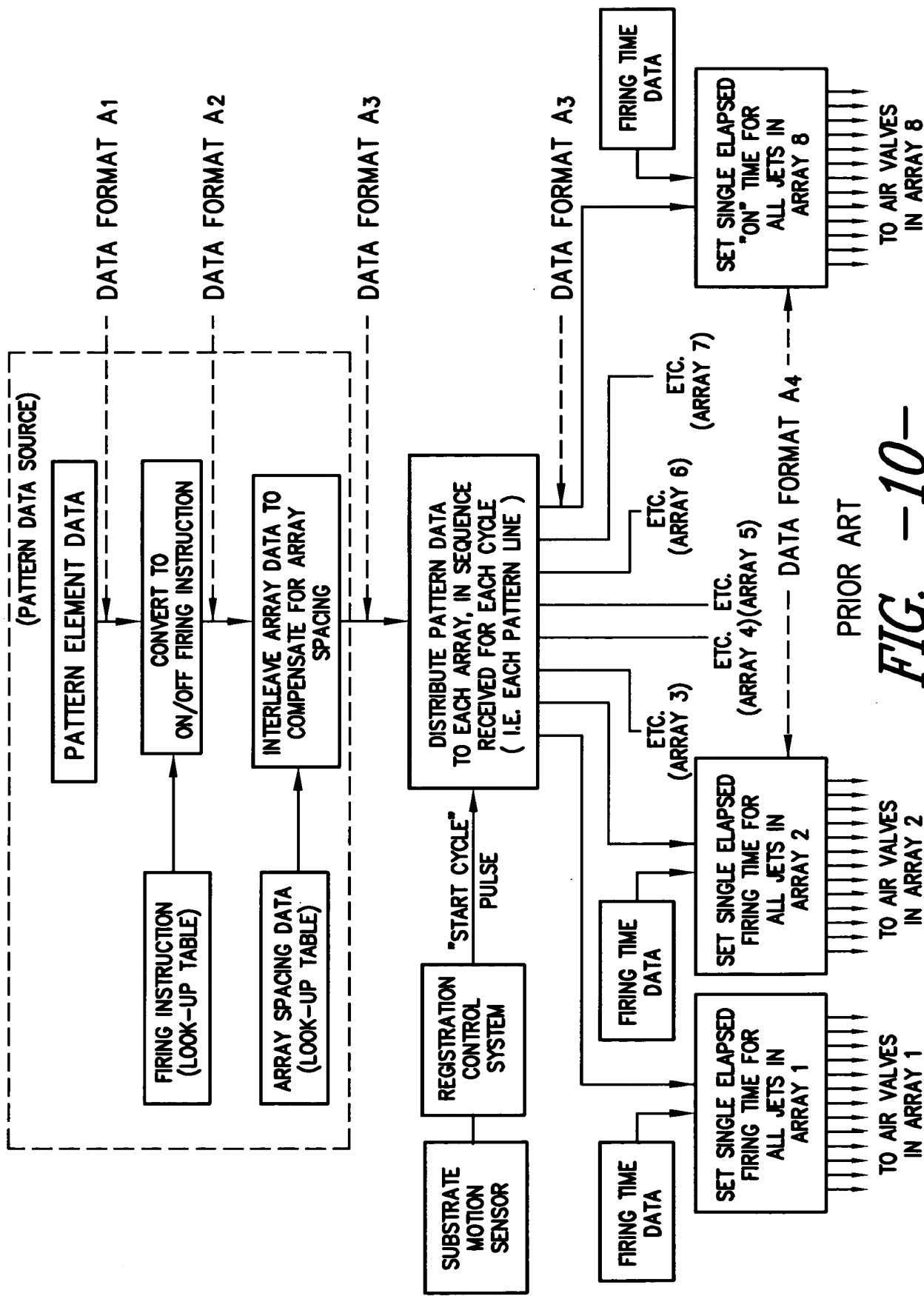
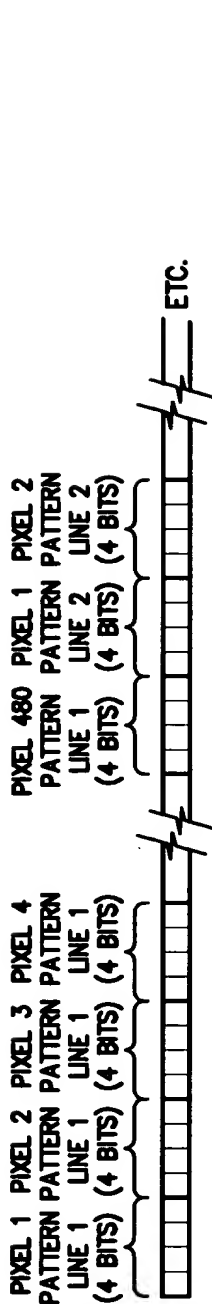
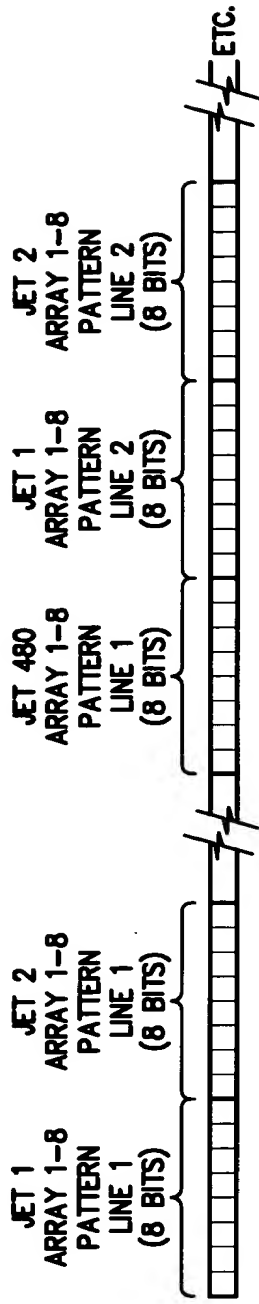


FIG. -10-

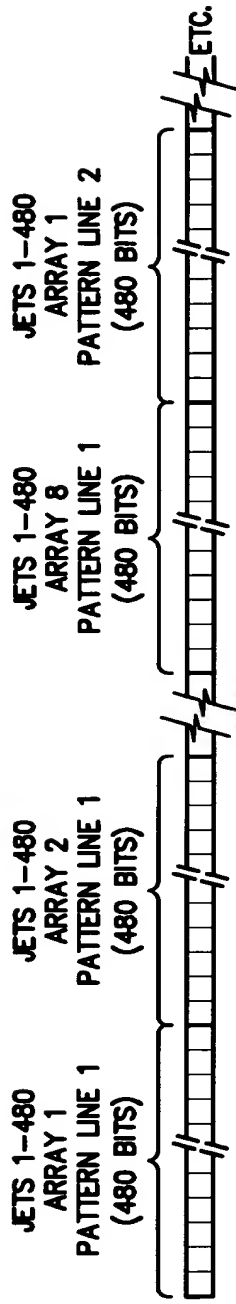
DATA FORMAT A1 :
4 BIT GROUP
DEFINES 1 OF 16 PRE-DEFINED
PATTERN ELEMENTS



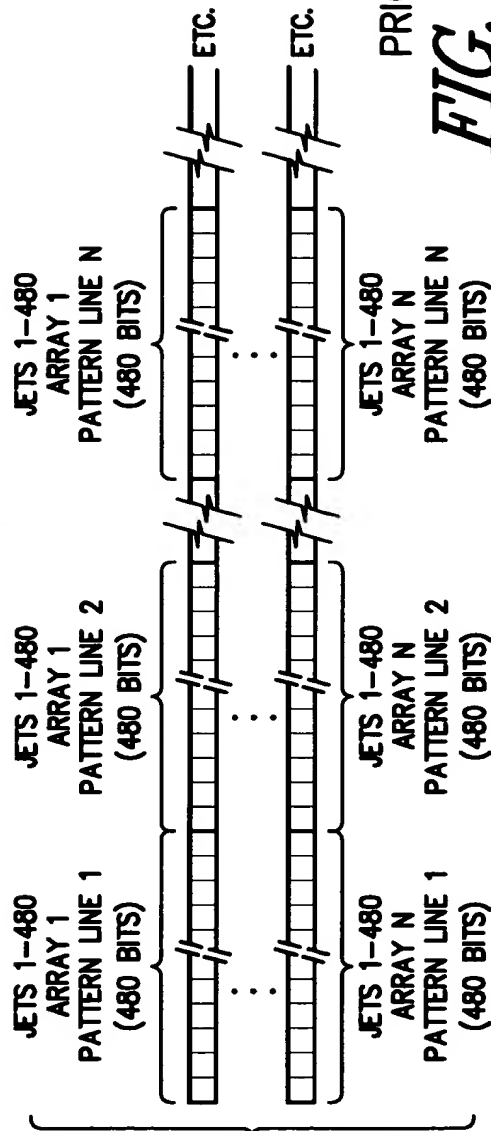
DATA FORMAT A2 :
EACH BIT INDICATES
"FIRE / NO FIRE"
FOR EACH JET ON
EACH ARRAY



DATA FORMAT A3 :
(EACH BIT INDICATES
"FIRE / NO FIRE" FOR EACH JET;
FIRING TIME TO BE PRESET)



DATA FORMAT A4 :
(EACH BIT INDICATES
"FIRE / NO FIRE" FOR EACH JET;
FIRING TIME IS PRESET)



PRIOR ART

FIG. -11-

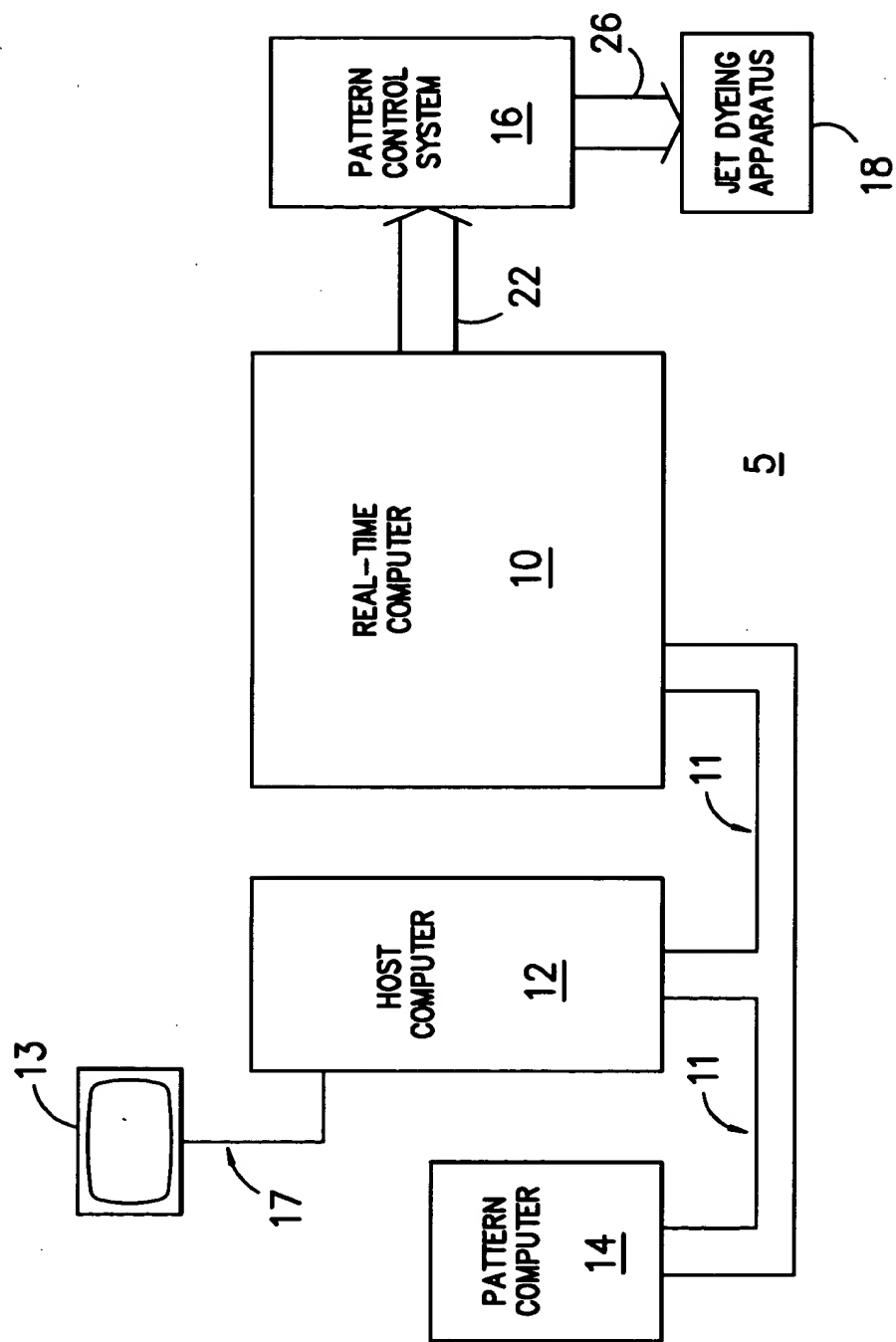


FIG. 12-

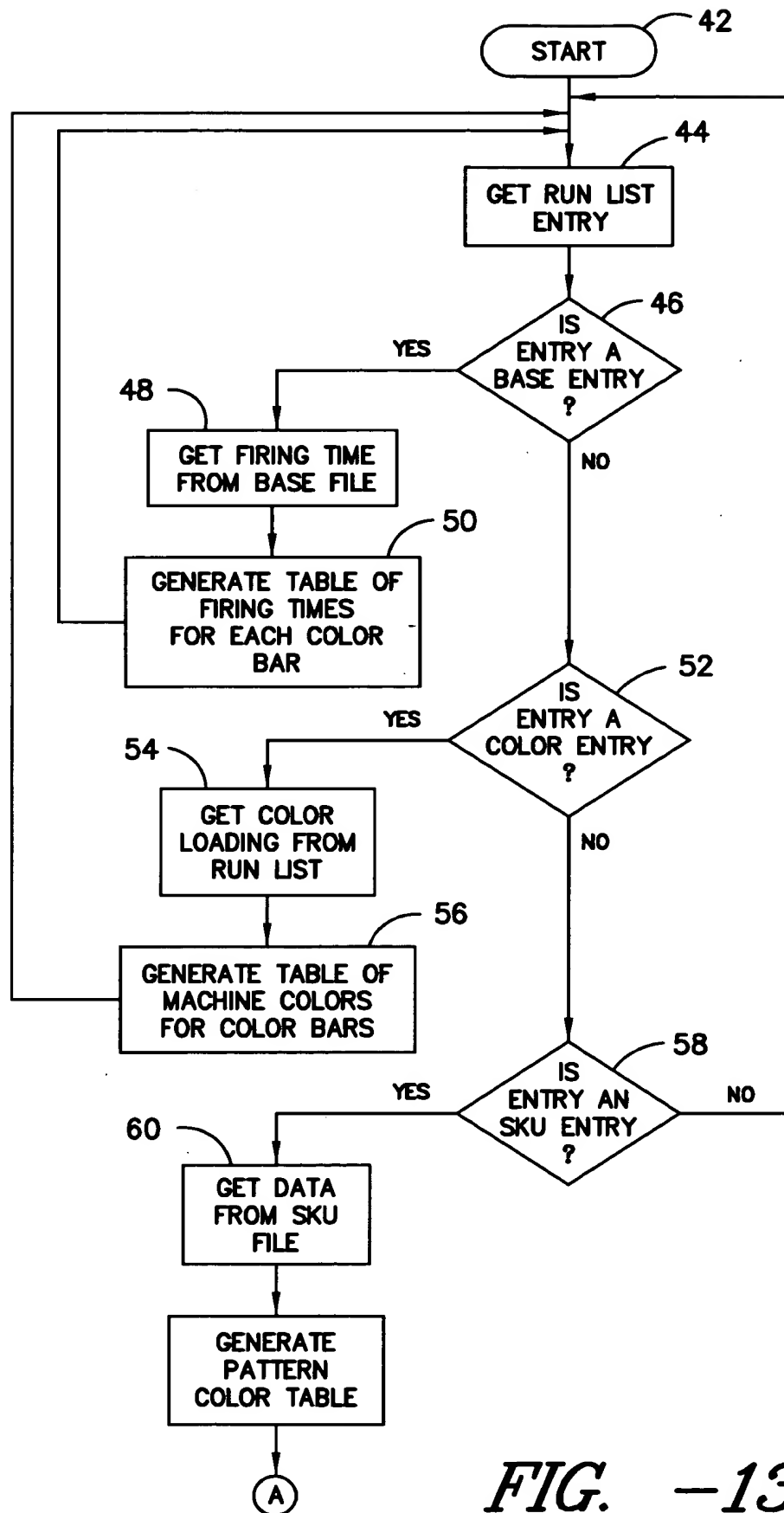


FIG. -13-

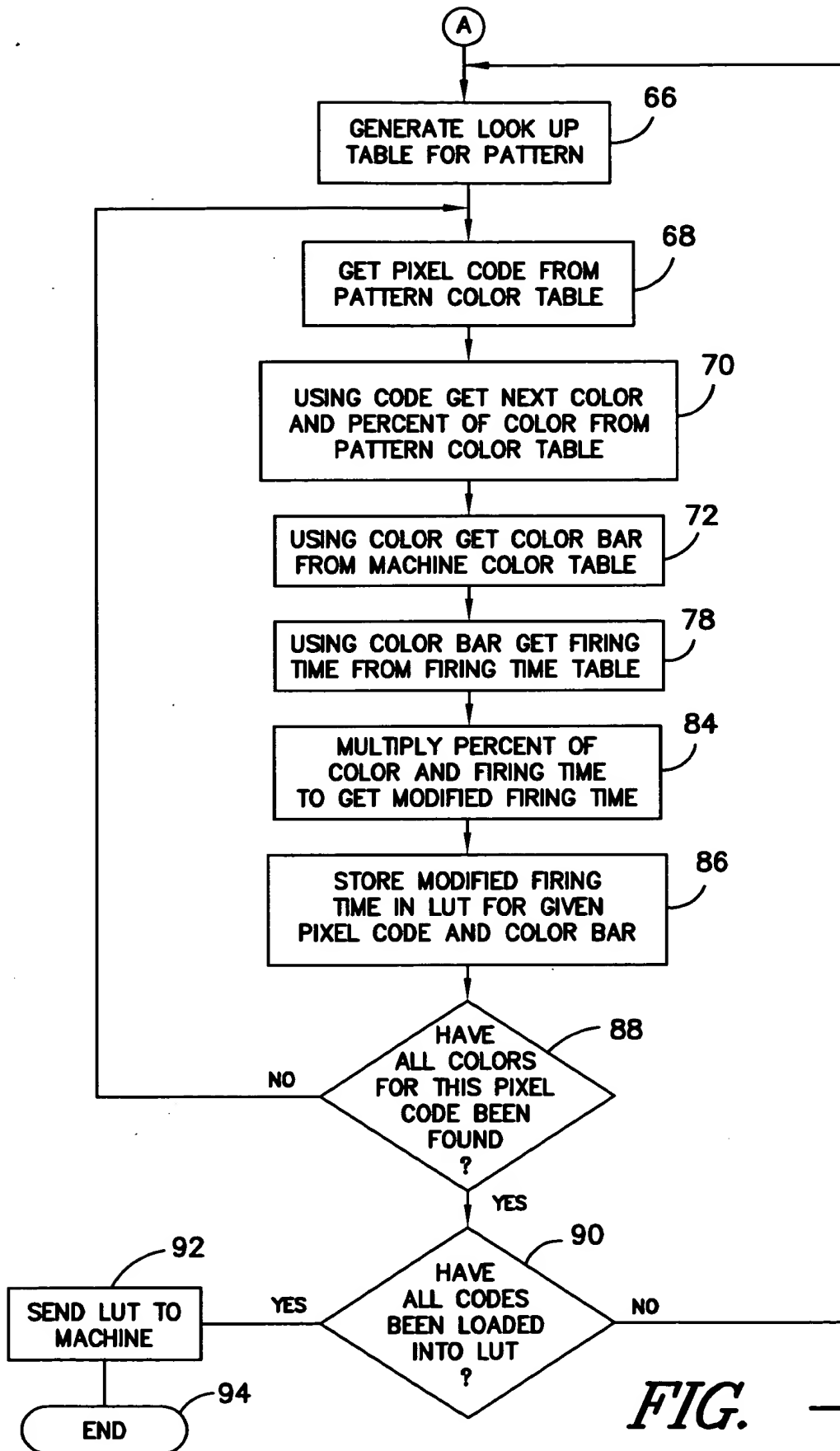


FIG. -14-

BASE WXYZ		MACHINE CONFIG.		SKU ABC	
BAR	FT	COLOR	BAR	CODE	COLOR
1	10	RED	1	A	RED
2	10	BLUE	2	B	BLUE
3	20	GREEN	3		
4	15	YELLOW	4		

FIG. -15A- FIG. -15B- FIG. -15C-

BASE WXYZ		MACHINE CONFIG.		SKU ADE	
BAR	FT	COLOR	BAR	CODE	COLOR
1	10	RED	1	A	50% RED, 50% BLUE
2	10	BLUE	2	C	GREEN
3	20	GREEN	3		
4	15	YELLOW	4		

FIG. -16A- FIG. -16B- FIG. -16C-

		LUT'S			
		1	2	3	4
C O D E S	A	10MS	0	0	0
	B	0	10MS	0	0

FIG. -15D-

		LUT'S			
		1	2	3	4
C O D E S	A	5MS	5MS	0	0
	C	0	0	20MS	0

FIG. -16D-

		LUT'S			
		1	2	3	4
C O D E S	A	0	0	20MS	0
	B	0	10MS	0	0
	C	5MS	2.5MS	0	3.75MS

FIG. -16E-

		LUT'S				
		1	2	3	4	5
C O D E S	A	0	0	0	0	10MS
	B	0	10MS	0	0	0

FIG. -16F-

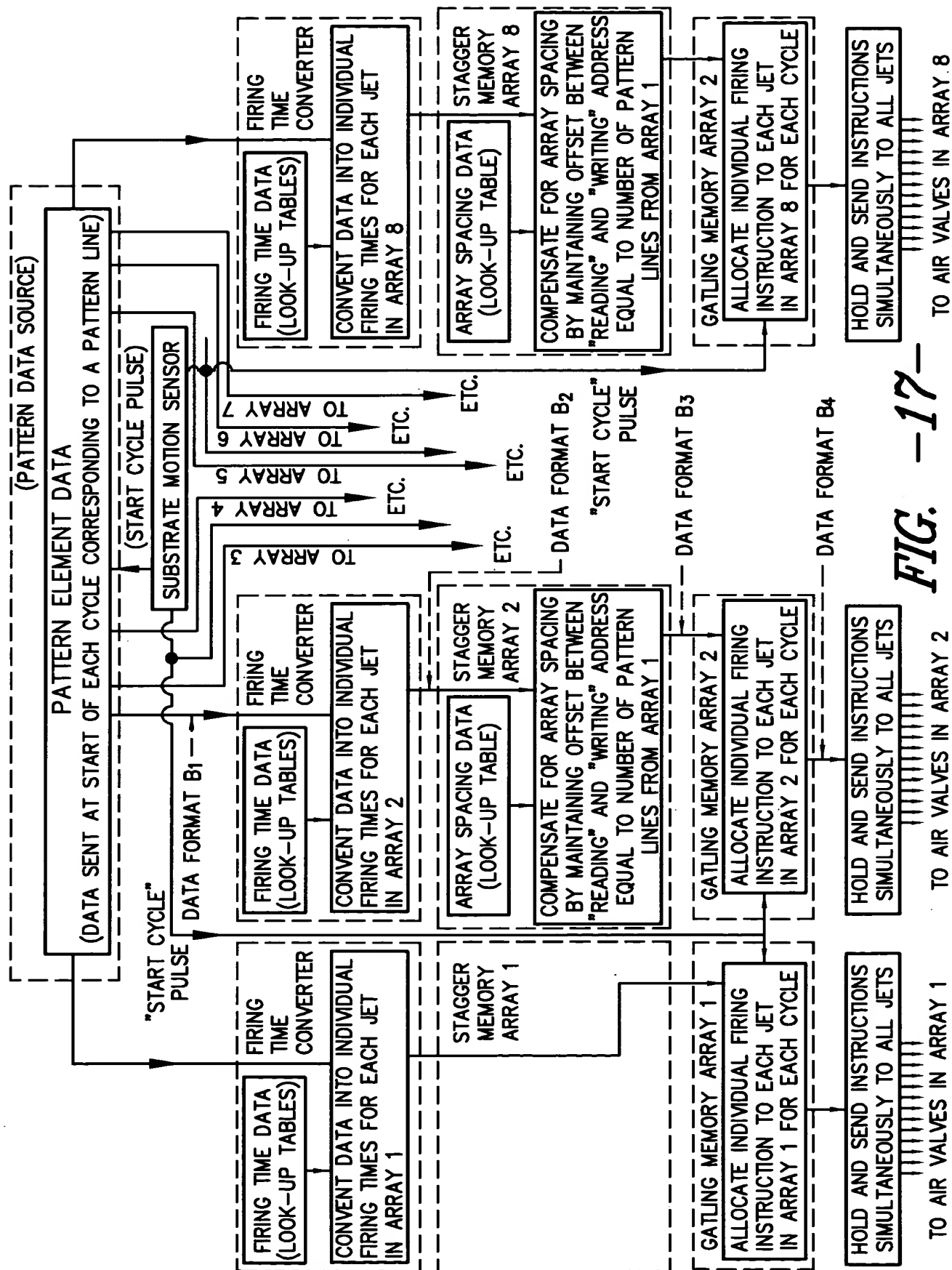
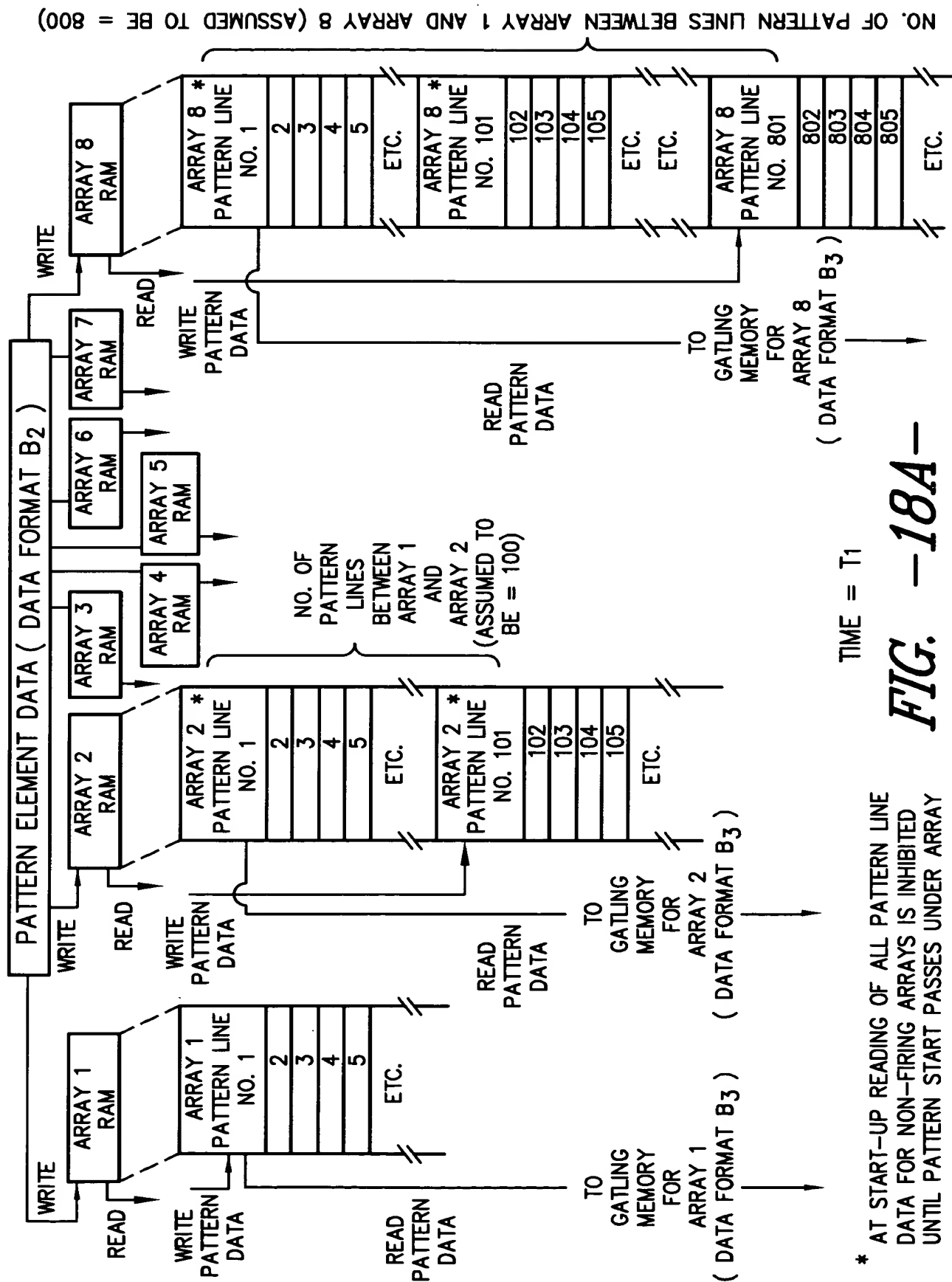


FIG. -17-



* AT START-UP READING OF ALL PATTERN LINE DATA FOR NON-FIRING ARRAYS IS INHIBITED UNTIL PATTERN START PASSES UNDER ARRAY

FIG. -18A-

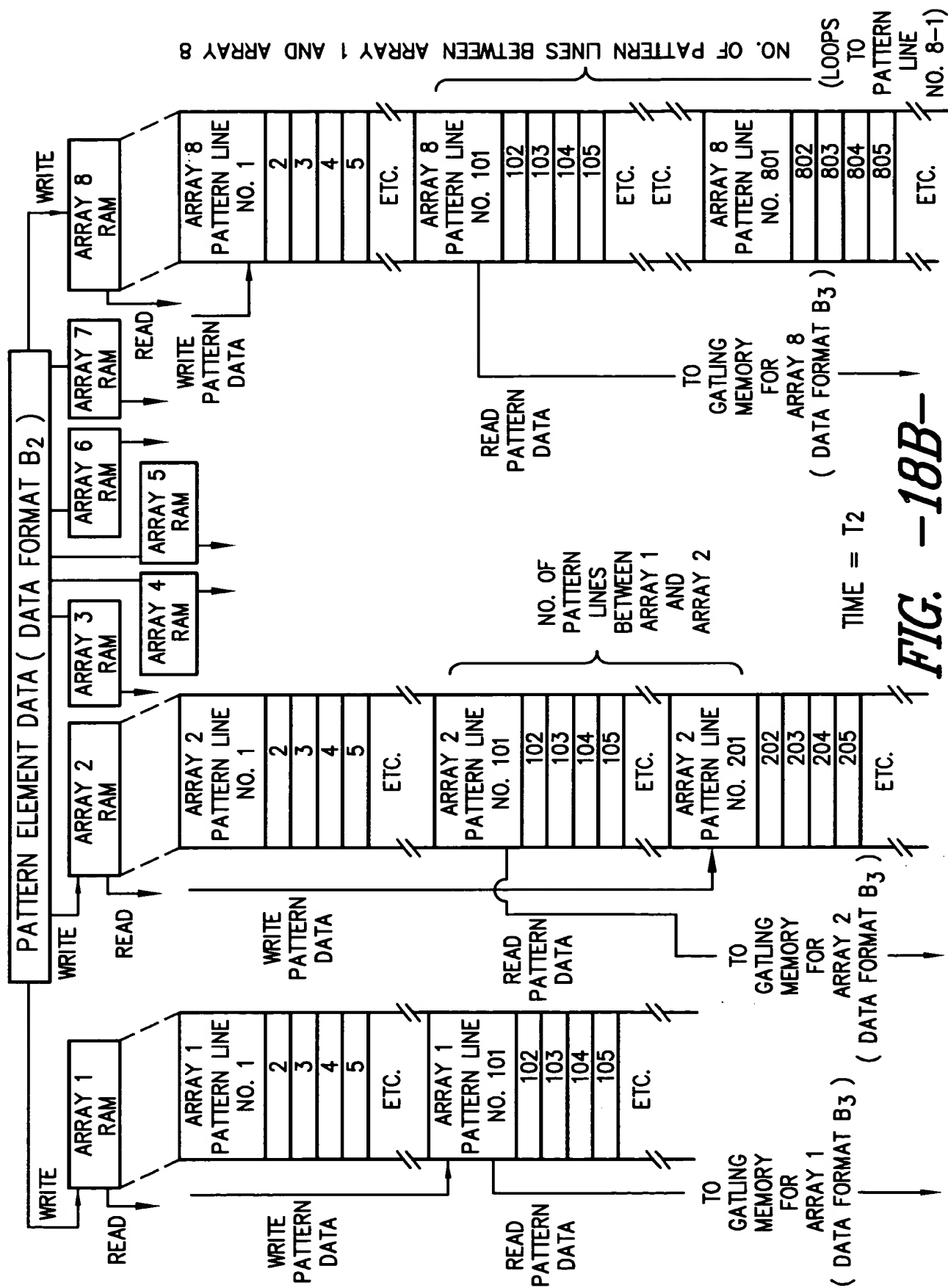


FIG. -18B-

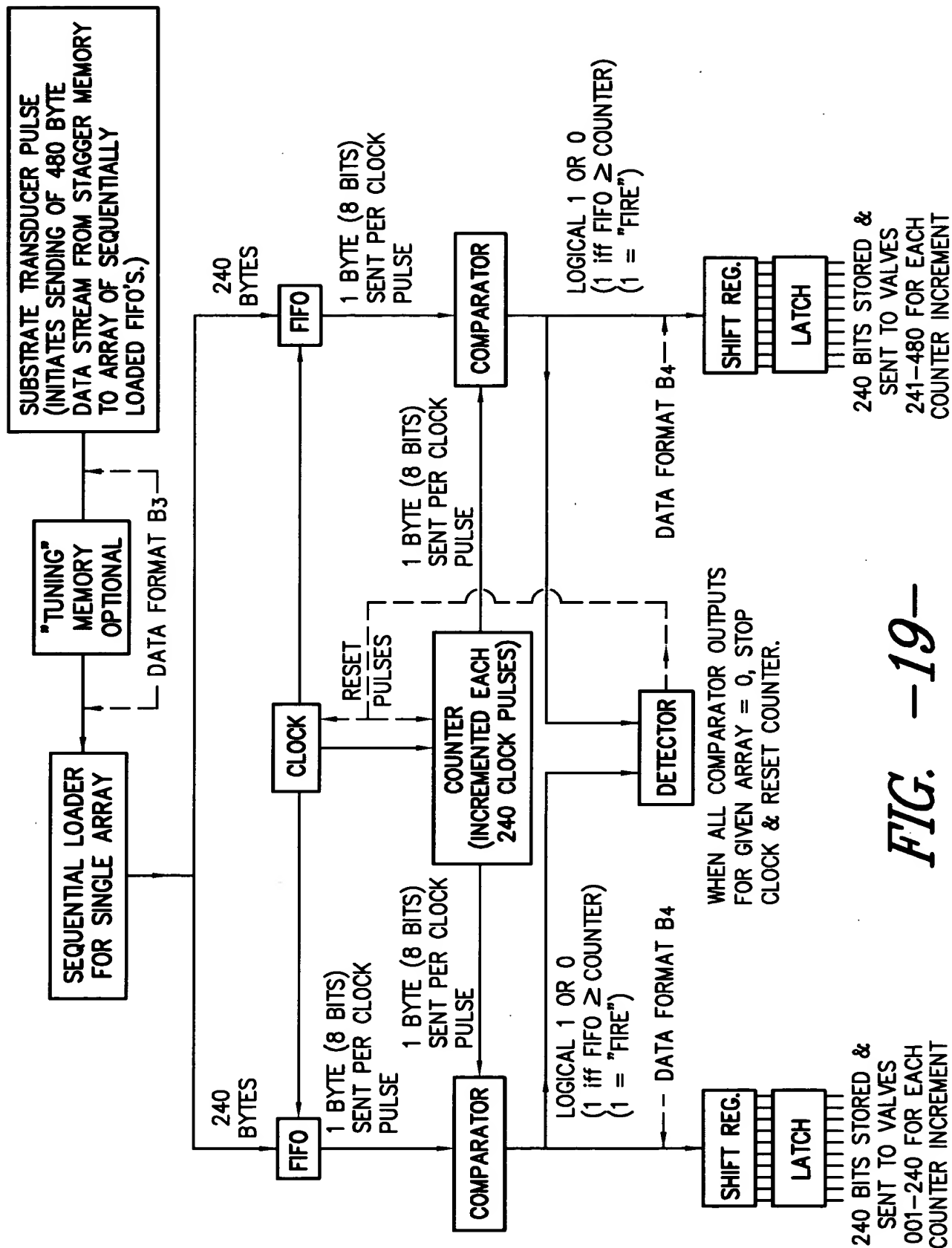


FIG. -19-

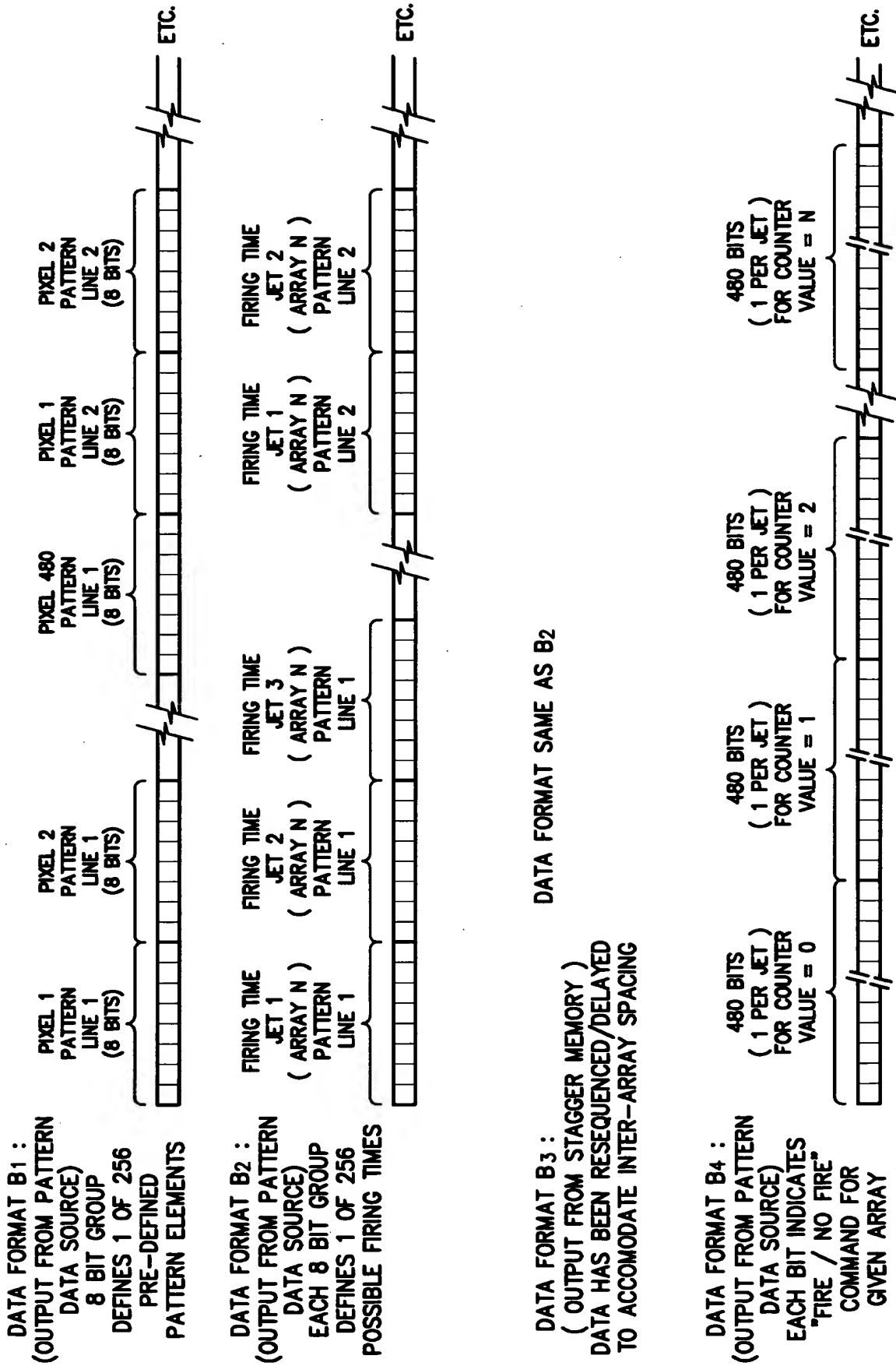


FIG. -20-

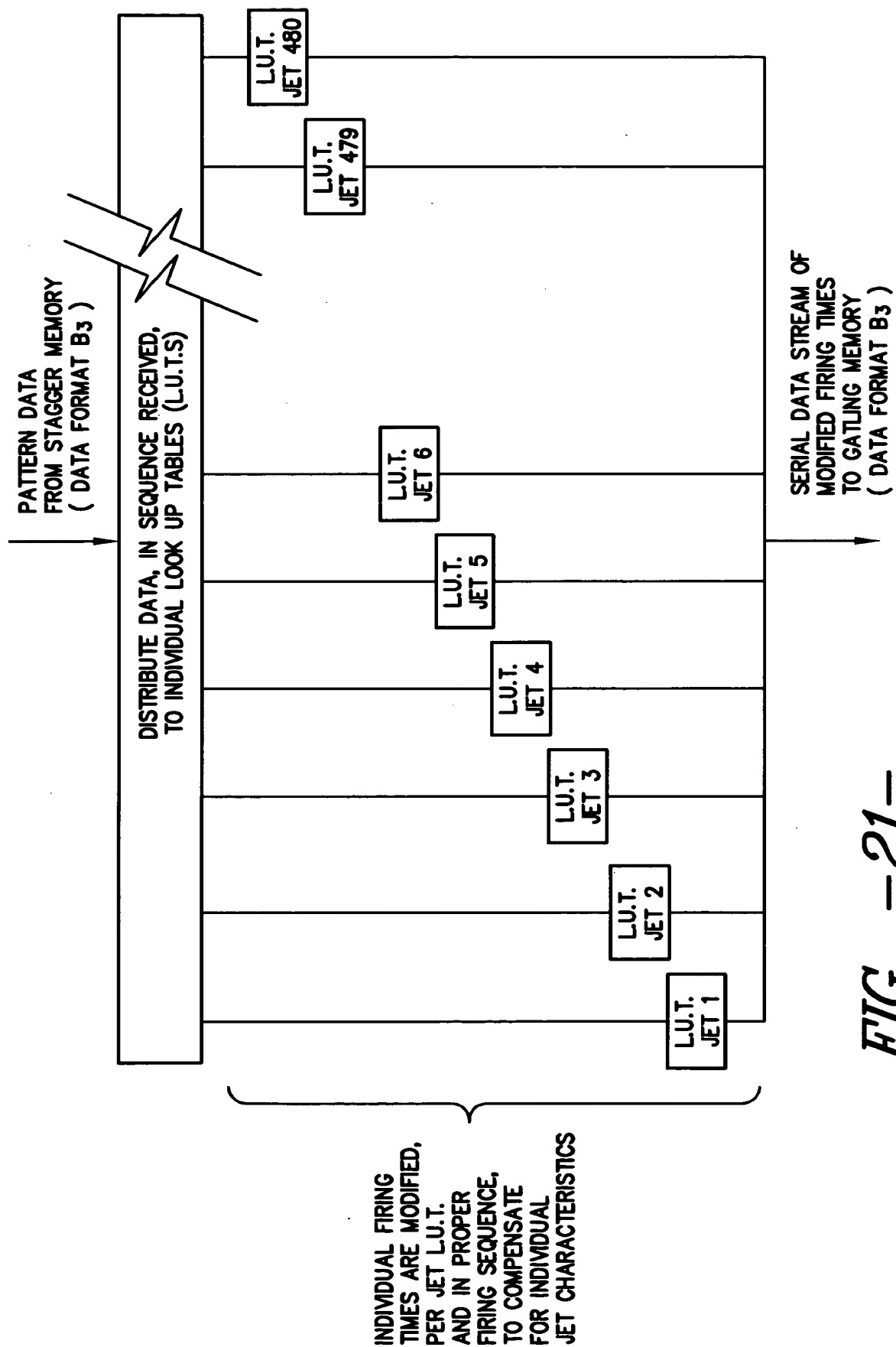


FIG. -21-